

ABSTRACT

Optical devices, are provided, having a first conductive layer, an optical layer, arranged over the first conductive layer, and a second conductive layer, arranged over a portion of the optical layer, in accordance with a predetermined pattern. The optical layer is transparent to at least a wavelength of interest and has an index of refraction, which is a function of a variable, substantially reversible, dopant concentration or dopant concentration gradient in it. By applying an electric potential between the first and second conductive layers, a change in the index of refraction is formed within the optical layer, between the portion abut with the predetermined pattern and the remainder of the optical layer. Additionally, the present invention provides optical devices formed as stacks of layered constructions, each layered construction comprising a first conductive layer, an optical layer, arranged over the first conductive layer, and a second conductive layer, arranged over the optical layer, these layered constructions being operable as tunable interference filters.